

REMARKS

Applicant has carefully reviewed the Office Action mailed February 5, 2003. With this Response, Applicant has added new claims 25-34 and cancelled claims 22-24. Claims 25-34 are pending in this application. It is noted that Applicant has amended and cancelled the above-identified claims solely to advance prosecution of the instant application and to obtain allowance on allowable claims at the earliest possible date. Accordingly, no admission may be inferred from the amendments of claims herein. Applicant expressly reserves the right to pursue the originally filed claims in the future.

Claims 22-24 were rejected under 35 U.S.C. 102(b) as being anticipated by Tremblay (U.S. Patent 5,345,734). Tremblay discloses a window assembly consisting of a pair of glass sheets 12 and 14 arranged in a spaced parallel relationship to one another and forming an air space 15 therebetween (column 2, lines 1-14). The window assembly also includes a rectangular spacing unit 16 having an inner face 18 and an outer face 20 (column 2, lines 14-16). It is necessary to drill holes in the spacing unit of window assembly so that gas may be injected from one hole between the glass sheets and air may exit from a second hole (column 2, lines 25-28). A sealing device 10 is provided to be inserted into these holes after the gas has been injected (column 2, lines 31-32).

Applicant's invention as recited in new independent claim 25 comprises an in situ insulating glass unit encased in a frame. The insulating glass unit comprises a pair of panes and a spacer having an outer wall extending between the panes. The panes and the spacer define a between-pane space fluidly communicating with an outer atmosphere via a hole defined by the spacer and a bore defined by the frame.

Unlike Applicant's claimed invention, the apparatus disclosed by Tremblay does not include a frame encasing an insulating glass unit and a bore defined by the frame that fluidly communicates with the between pane space. The bore defined by the frame allows the pressure within the between-pane space to reach equilibrium with the pressure in the outer atmosphere while the insulating glass unit is encased in the frame. Accordingly, cupping or bulging of the panes in situ is eliminated by precluding any pressure differential between the between-pane space and the outer atmosphere.

Claims 22-24 were also rejected under 35 U.S.C. 102(b) as being anticipated by Leopold (U.S. Patent 5,313,761). Leopold discloses an insulating glass unit 10 including a spacer assembly 12 sandwiched between two glass sheets 14 to define a space 20. In the embodiment shown in figure 4, the insulating glass unit 10 includes a connector structure 34 including a fastener arrangement 100 for both connecting the opposite frame ends together and providing a temporary vent for the space 20 while the unit is being fabricated (column 7, lines 37-41). The illustrated fastener arrangement includes holes 102, 104 and a rivet 106 extending through the holes (column 7, lines 41-46). When the rivet is set, no further communication through the holes is possible so an inert gas is trapped in the space 20.

Unlike the invention recited in Applicant's new claim 25, the apparatus disclosed by Leopold does not include a frame encasing an insulating glass unit and a bore defined by the frame that fluidly communicates with the between-pane space. The frame provides for attachment of the insulating glass unit to a building, for example, at a construction site. The bore defined by the frame provides a way for the pressure inside the insulating glass unit to equalize with the pressure outside the insulating glass unit (e.g., when the insulating glass unit is

transported to a destination having a pressure different than the local pressure where the insulating glass unit was fabricated).

Claims 22-24 were also rejected under 35 U.S.C. 102(b) as being anticipated by Miller (U.S. Patent 4,520,602). Miller discloses a spacer frame 14 made of spacer frame members 15. Adjacent ends of the spacer frame members 15 are locked to prevent separation of the adjacent ends (column 5, lines 60-64). The locking mechanism may include a sheet metal fastener such as an expanding rivet 35 that is inserted through a hole 24 and set, thereby locking a corner key 32 in position within the spacer frame member and preventing separation thereof. (column 6, lines 17-27). An air passageway 23 is provided between adjacent spacer frame members in at least one corner of the spacer frame 14 to allow air to flow into and out of a cavity 24 until the final seal is applied to the cavity (column 4, lines 41-44). An air passageway seal 25 is applied over the outside opening of each air passageway 23 (column 4, lines 49-51).

Unlike the invention recited in Applicant's new claim 25, Miller does not disclose a frame defining a bore that fluidly communicates with the between-pane space of an insulating glass assembly. The bore defined by the frame assures that the pressure within the between-pane space is equal to the pressure in the outer atmosphere while the in situ insulating glass unit is encased in the frame. This equal pressure prevents the panes of the insulating glass assembly from becoming cupped inward or bulged outward.

Because neither Tremblay nor Leopold nor Miller disclose a frame defining a bore, these patents do not anticipate Applicant's claimed invention. Applicant's claimed invention is a non-obvious improvement over the prior art because it eliminates bowing or cupping of the panes of an insulating glass unit. For these reasons, Applicant respectfully submits that independent claim 25 is now in condition for allowance. Claims 26-34 depend from claim 25 and recite

additional limitations, Applicant respectfully submits that these claims are also in condition for allowance.

In light of the above, Applicant respectfully submits that all of the claims are in condition for allowance and courteously requests prompt notice of the same. If a telephone conference would be of assistance, please contact the undersigned practitioner at 612/492-7000.

Respectfully submitted,



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